CLAIMS

We claim:

1. A method of identifying a portion of computer program code as a candidate for a modification, said method comprising the steps of :

 scanning and parsing source code corresponding to the computer program code to determine static information concerning the computer program code;

 storing the static information in a database;

 collecting dynamic information concerning the computer program code during an execution of the computer program code;

 storing the dynamic information in the database;

 developing relationships and dependencies responsive to the static information and dynamic information stored in database;

 storing the relationships and dependencies in the database; and

 providing for a query of the database to produce a set of potential candidates of computer program code meeting a constraint of the query.

2. The method of claim 1 wherein if insufficient candidates are returned by the query, then providing for a relaxing of the constraint, and a repetition of the query.

3. The method of claim 2 further comprising the step of identifying a portion of the computer program code as a candidate for re-implementation as a database stored procedure call.

4. The method of claim 3 wherein the query searches the database for a portion of the computer program code having static information indicating that the portion of the computer program code contains a call to a database management system, and having dynamic information indicating that the portion of the computer program code is subject to a call by another portion of computer program code.

5. The method of claim 4 wherein the query searches the database for a portion of the computer program code having static information indicating that the portion of the computer program code contains a number, above a specified first threshold, of calls to a database management system, and having dynamic information indicating that the portion of the computer program code is subject to a number of calls, above a specified second threshold, by another portion of computer program code.

6. The method of claim 2 further comprising the step of identifying a portion of the computer program code as a candidate for re-implementation as a Web-enabling interface call.

7. The method of claim 6 wherein the query searches the database for a portion of the computer program code having static information indicating that the portion of the computer program code contains a transaction call.

8. The method of claim 7 wherein the query also searches the database for a portion of the computer program code having static information indicating that the portion of the computer program does not contain screen output related program code.

9.   An article of manufacture for use in a computer system for identifying a portion of computer program code as a candidate for a modification, said article of manufacture comprising a computer-readable storage medium having a computer program embodied in said medium which causes the computer system to execute a method comprising the steps of:

scanning and parsing source code corresponding to the computer program code to determine static information concerning the computer program code;

storing the static information in a database;

collecting dynamic information concerning the computer program code during an execution of the computer program code;

storing the dynamic information in the database;

developing relationships and dependencies responsive to the static information and dynamic information stored in database;

storing the relationships and dependencies in the database; and

providing for a query of the database to produce a set of potential candidates of computer program code meeting a constraint of the query.

10.   The article of manufacture of claim 9 wherein if insufficient candidates are returned by the query, then providing for a relaxing of the constraint, and a repetition of the query.

11.   The article of manufacture of claim 10 wherein the embodied computer program causes the computer system to execute the method step of identifying a portion of the computer program code as a candidate for re-implementation as a database stored procedure call.

1 12. The article of manufacture of claim 11 wherein the query searches the database for a
2 portion of the computer program code having static information indicating that the portion of
3 the computer program code contains a call to a database management system, and having
4 dynamic information indicating that the portion of the computer program code is subject to a
5 call by another portion of computer program code.

1 13. The article of manufacture of claim 12 wherein the query searches the database for a
2 portion of the computer program code having static information indicating that the portion of
3 the computer program code contains a number, above a specified first threshold, of calls to a
4 database management system, and having dynamic information indicating that the portion of
5 the computer program code is subject to a number of calls, above a specified second threshold,
6 by another portion of computer program code.

14. The article of manufacture of claim 10 wherein the embodied computer program
causes the computer system to execute the method step of identifying a portion of the
computer program code as a candidate for re-implementation as a Web-enabling interface call.

15. The article of manufacture of claim 14 wherein the query searches the database for a
2 portion of the computer program code having static information indicating that the portion of
3 the computer program code contains a transaction call.

1 16. The article of manufacture of claim 15 wherein the query also searches the database for
2 a portion of the computer program code having static information indicating that the portion of
3 the computer program does not contain screen output related program code.

17. A computer system for identifying a portion of computer program code as a candidate for a modification, said computer system comprising :

    a parser for scanning and parsing source code corresponding to the computer program code to determine static information concerning the computer program code;

    an execution monitor for collecting dynamic information concerning the computer program code during an execution of the computer program code;

    relationships and dependencies developed responsive to the static information and dynamic information;

    a database for storing the static information, the dynamic information, and the relationships and dependencies; and

    a query of the database to produce a set of potential candidates of computer program code meeting a constraint of the query.

18. The computer system of claim 17 wherein if insufficient candidates are returned by the query, then providing for a relaxing of the constraint, and a repetition of the query.

19. The computer system of claim 18 further comprising an identification of a portion of the computer program code as a candidate for re-implementation as a database stored procedure call.

20. The computer system of claim 19 wherein the query searches the database for a portion of the computer program code having static information indicating that the portion of the computer program code contains a call to a database management system, and having dynamic information indicating that the portion of the computer program code is subject to a call by another portion of computer program code.

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1   21.   The computer system of claim 20 wherein the query searches the database for a portion

2   of the computer program code having static information indicating that the portion of the

3   computer program code contains a number, above a specified first threshold, of calls to a

4   database management system, and having dynamic information indicating that the portion of

5   the computer program code is subject to a number of calls, above a specified second threshold,

6   by another portion of computer program code.

1   22.   The computer system of claim 18 further comprising an identification of a portion of

2   the computer program code as a candidate for re-implementation as a Web-enabling interface

3   call.

23.   The computer system of claim 22 wherein the query searches the database for a portion

of the computer program code having static information indicating that the portion of the

computer program code contains a transaction call.

24.   The computer system of claim 23 wherein the query also searches the database for a

portion of the computer program code having static information indicating that the portion of

the computer program does not contain screen output related program code.